

Time:
30 - 45 minutes

Grades:
K – 8

Activity Summary:
This pre-visitation activity is a 17 question quiz rating a student's insect IQ. It introduces key terms and subjects related to insects.

Goal:
To introduce students to the exciting world of insects in preparation for Bugs class presented during Desert Outdoor Center visitation.

Directions:
1. Tell the students to take Insect IQ test and check answers.
2. Read answers and start discussion about insects.
3. Have students read and comment on insect facts.

2. Which of the following arthropods can fly:
   a) Arachnids b) Crustaceans c) Insects d) Myriopoda

3. Circle which of the following that insects DO NOT have:
   a) 3 body segments b) Fangs c) Antennae d) 6 legs

4. Insects have been on Earth for:
   a) 1 million years b) 50 million years c) 200 million years d) 400 million years

5. What is the proper name for creatures with hard, outer-body castings and jointed legs?
   a) Arthropods b) Insects c) Arachnid d) Mammals

6. Which of the following is not an insect:
   a) Dragonfly b) Beetle c) Moth d) Spider

7. Which insect protects itself by stinging:
   a) Fly b) Hornet c) Beetle d) Grasshopper

8. Insects make up what percentage of the worlds animals:
   a) 10% b) 30% c) 60% d) 90%

9. What are the three parts of an insect's body?
   a) Head, abdomen, tail b) Head, wing, tail c) Body, wings, legs d) Head, thorax, abdomen

10. What percentage of insects is harmful to humans:
    a) 1% b) 9% c) 13% d) 24%

11. Most insects hear, smell, and taste using which segment of their body?
    a) Thorax b) Head c) Abdomen d) Antennae

12. Name the strong lightweight covering that insects have:
    a) Endoskeleton b) Exoskeleton c) Armor d) Shell

13. A person who studies insects is an:
    a) Entomologist b) Paleontologist c) Arachnologist d) Insectologist

14. The series of stages an insect goes through as it changes from egg to adult is called:
    a) Chitin b) Metamorphosis c) Molting d) Nymph

15. Insects breathe through:
    a) Mouth b) Skin c) Spiracles d) Oral cavity

16. Insects have special mouth parts allowing them to:
    a) Chew b) Suck d) Pierce d) All

17. Insects are so successful because of their:
    a) Flying ability b) Small size c) Exoskeleton d) All

2. **c)** Insects

3. **b)** Insects have 3 body segments (head, thorax, and abdomen), three pairs of jointed legs connected to the thorax, compound eyes, and one pair of antennae.

4. **d)** Insect fossils have been found that date back 400 million years ago. This is 200 million years before dinosaurs existed.

5. **a)** Arthropods

6. **d)** Scientists group arthropods into classes based on similar characteristics. Spiders are in the class arachnida because they have 8 legs and 2 body segments. Scorpions, ticks, and mites are also arachnida. Other Arthropoda include Insecta (flys, moths, and beetles), crustacea (shrimp, lobster, crab), diplopoda (millipedes), and chilopoda (centipedes).

7. **b)** Can sting repeatedly unlike bees and use their venom to defend the larvae living in their nest.

8. **d)** The insect class is the most diverse group of animals on Earth and makes up more than half of all animal species.

9. **b)** Head, thorax, abdomen

10. **a)** Insects are well known for biting, stinging, infecting, and pestering. However, only 1% of insects are considered harmful to humans. The vast majority are beneficial. They pollinate, control pests and weeds, decompose, provide honey, wax, silk, and other valuable materials, and are essential food source for wildlife.

11. **d)** Insects use their antennae to feel whether a surface is wet, dry, smooth, rough, hot or cold. Antennae contain thousands of tiny cells that receive odors that inform the insect of a food supply. Tiny hairs on the mouthparts and the antennae contain most of the insect's taste receptors. Many insects taste with their feet as well — these insects can taste food by walking on it.

12. **b)** This tough outer coat covers an insect’s body and is an insect’s skeleton. It’s like a shell enclosing the insect. It prevents water, germs, and chemicals from entering body. It is a shock absorber and protects against enemies and hot or cold weather.

13. **a)** The branch of Zoology that deals with insects.

14. **a)** The complete form of metamorphosis that an insect passes through includes egg, larvae (i.e. caterpillar, maggot), pupae (i.e. cocoon, chrysalis), and adult.

15. **c)** You breathe in and out through your mouth and the two nostrils in your nose. Insects have about 10 pairs of "nostrils" along the thorax and abdomen. Each segment of the insect's body has a pair of nostrils. They are little holes, called spiracles, which lead into a system of tubes that carry oxygen throughout the insect's body. If you look at a grasshopper through a magnifying glass, you can see the spiracles along the side of the abdomen.

16. **d)** The feeding habits of an insect depend on its mouthparts. Grasshoppers, beetles, cockroaches, and ants have powerful jaws that bite and chew food. The mouthparts of some insects are hollow tube like straws. Butterflies

wide range of habitats. These include tundra, water, deserts, and forest. Their exoskeleton is a form of protection. Other reasons include what they eat and reproduction rate. They eat anything. Different insects eat nectar and pollen, plant leaves, blood, feces, and wood. Insects reproduce quickly and in large numbers.

Reference:

Hutchins E., Ross. "Insects." *True Bugs Library - Animals.* Scholastic. http://teacher.scholastic.com/activities/explorations/bug/librarysub.asp. 8/1/13.